

## 450nm TGG Fiber Faraday Rotator

450nm TGG Fiber Faraday Rotator is a fiber component which can change state of polarization (SOP), the output polarization light will rotate 45° or 90° when the input light passes faraday rotator, It's widely used in Quantum Communication System and Fiber Optic Sensor. High power type is available upon request.

### Application:

Quantum Communication  
Fiber Optic Sensor  
Fiber Laser  
Lab And Research

### Features:

High Extinction Ratio  
High Power Available  
Low Insertion Loss  
High Reliability



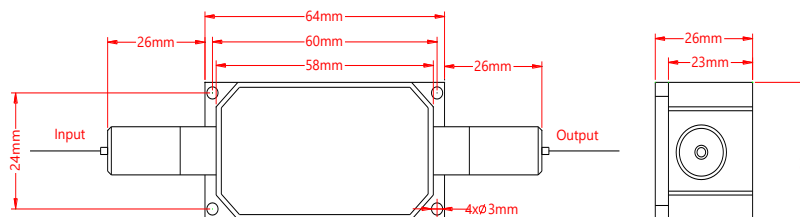
### Specification:

| Parameter                                   | Symbol    | Value                      |            | Unit   |
|---------------------------------------------|-----------|----------------------------|------------|--------|
| Center Wavelength                           | $\lambda$ | 450                        |            | nm     |
| Bandwidth                                   | BW        | $\pm 5$                    |            | nm     |
| Faraday Rotate Angle                        |           | $45 \pm 3$                 | $90 \pm 3$ | Degree |
| Typ. Insertion Loss                         | IL        | 0.9                        | 1.2        | dB     |
| Max. Insertion Loss                         | IL        | 1.2                        | 1.5        | dB     |
| Min. Extinction Ratio (for PM fiber output) | ER        | 18                         |            | dB     |
| Max. PDL (for SM fiber output)              | PDL       | 0.15                       |            | dB     |
| Min. Return Loss                            | RL        | 50                         |            | dB     |
| Max. Optical Power (CW)                     | P         | 500 or specify             |            | mW     |
| Max. Tensile Load                           |           | 5                          |            | N      |
| Fiber Type                                  |           | PM Panda fiber or SM fiber |            | -      |
| Operating Temperature                       | T         | $-5 \sim 70$               |            | °C     |
| Storage Temperature                         | T         | $-40 \sim 85$              |            | °C     |
| Package Dimension                           |           |                            |            | mm     |

Notice: Above specifications are tested at center wavelength without connector in room temperature @23°C.

For devices with connectors, IL will be 0.3dB higher, RL will be 5dB lower, ER will be 2dB lower, slow axis is default aligned to the connector key.

### Drawing:



### Ordering Information (Part Number):

TFR-**WWW-A-FF-J-LL-CC**

| <b>WWW</b>    | <b>A</b>     | <b>FF</b>                              | <b>J</b>             | <b>LL</b>    | <b>CC</b>    |
|---------------|--------------|----------------------------------------|----------------------|--------------|--------------|
| Wavelength    | Rotate Angle | Fiber Type (Input/Output)              | Fiber Jacket         | Fiber Length | Connector    |
| 405 - 405nm   | 4 - 45°      | PP - PM fiber on input and output port | B - 250um Bare Fiber | 05 - 0.5m    | NE - None    |
| 410 - 410nm   | 9 - 90°      | SS - SM fiber on input and output port | 9 - 900um Loose Tube | 10 - 1.0m    | FA - FC/APC  |
| 420 - 420nm   |              | PS - PM fiber on input                 | 2 - 2.0mm Loose Tube | 15 - 1.5m    | FU - FC/UPC  |
| 430 - 430nm   |              | SM fiber on output                     | 3 - 3.0mm Loose Tube | 20 - 2.0m    | SA - SC/APC  |
| 440 - 440nm   |              | SP - SM fiber on input                 |                      | SS - Specify | SU - SU/APC  |
| 450 - 450nm   |              | PM fiber on output                     |                      |              | LA - LC/APC  |
| 458 - 458nm   |              |                                        |                      |              | LU - LC/UPC  |
| SSS - Specify |              |                                        |                      |              | SS - Specify |